

Executive Order (EO) 14008 on Climate Change

CMRA Portal Status Update

(Climate Mapping for Resilience and Adaptation)



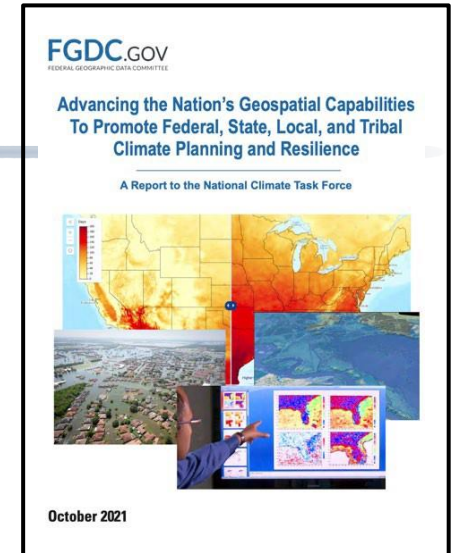
September 7, 2022

Tony LaVoi, NOAA Chief Data Officer & NGAC Member

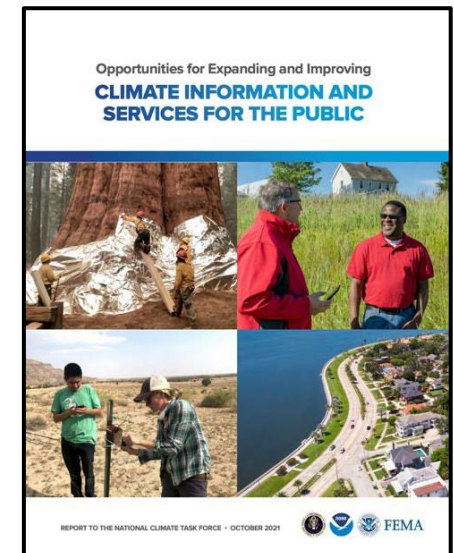
Kim Valentine, NOAA Geospatial Information Officer

NGAC and EO 14008

- EO 14008 issued in January 2021
- Two climate information reports to the Climate Task Force (FGDC named lead for one)
- NGAC engagement (docs @ www.fgdc.gov/ngac)
 - April 2021: Introduced CRIS concept; facilitated discussion on Day 1 and 2; NGAC feedback on approach
 - June 2021: Climate Mapping Report update; The Opportunity Project Climate Smart Communities
 - October 2021: Overview of Climate Mapping and Climate Information System reports; NGAC resolution
 - December 2021: CRIS update; FGDC Evaluation of Climate Mapping Capabilities and FGDC Core Activities
 - May 2022: CRIS and READI Update



FGDC Report on Advancing Geospatial Capabilities

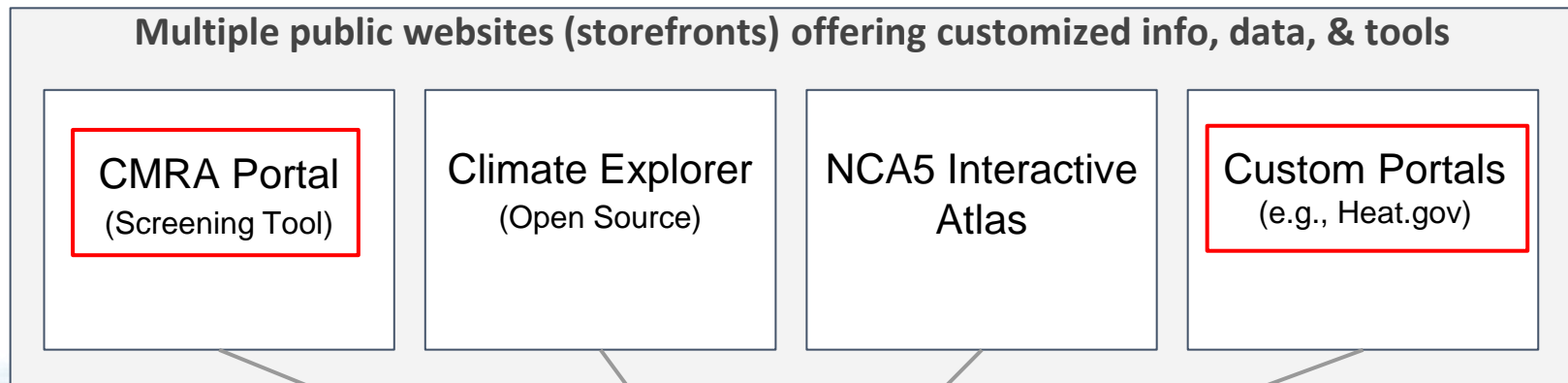


OSTP/NOAA/FEMA
Report on Climate Information and Services

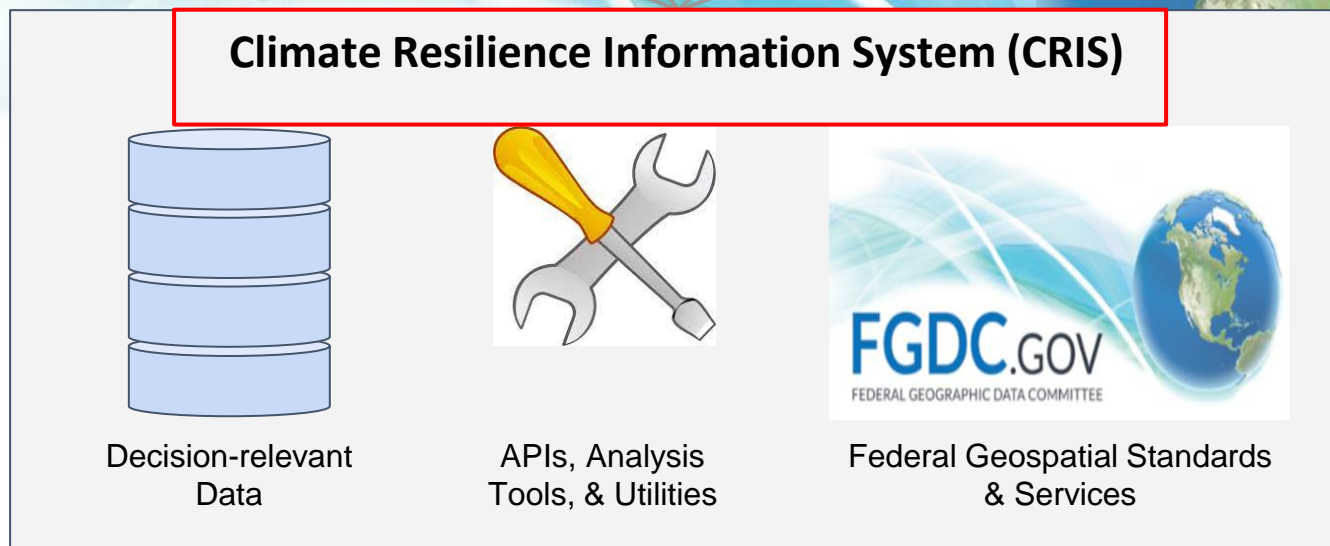
NGAC Resolution

*“The NGAC supports the findings and recommendations of the FGDC report, “Advancing the Nation’s Geospatial Capabilities to Promote Federal, State, Local, and Tribal Climate Planning and Resilience,” and **recommends an immediate roll out of pilots, prototyping, and exploratory activities that complement and supplement the 120-day review described in the report.** The NGAC believes that this parallel approach to addressing Federal climate mapping services will help align and accelerate the deployment of data and services to meet the needs of the Nation.”*

Approved by the NGAC, October 13, 2021



For **Consumers**
of Services



For **Designers**
of Services

Climate Resilience Information System (CRIS)

- US Global Change Research Program (USGCRP), in partnership with the FGDC, is leading a cross-agency effort to develop CRIS – Climate Resilience Information System
- Brings together climate-relevant Federal data to support local planning and decision-making to help protect people, property, and infrastructure
- Complements the U.S. Climate Resilience Toolkit (CRT), which offers discovery metadata and links to a wide range of Federal decision-support tools and information resources
- **Scope:** five climate-driven hazards, including extreme heat, coastal inundation, flooding, drought, and wildfire
- **Components:** (1) National Climate Hazards Portal, (2) National Screening Tool [CMRA Portal], and (3) Climate Maps & Data Explorer
- **Target Audiences:** Decision-Makers, Service Providers, and Public

Climate Mapping for Resilience and Adaptation (CMRA)

- Same concept as **RE**silience and **AD**aptation Information (READI) Portal (READI) but the name has changed
- Executive Order 14008 directs the National Climate Task Force to:
*“facilitate the planning and implementation of key Federal actions... to **increase resilience** to the impacts of climate change” and to “ensure federal infrastructure investment[s] **reduce climate pollution**.”*
- The Infrastructure Investment and Jobs Act (IIJA) represents \$1.2 trillion in infrastructure spending, \$47 billion of which is for resilience.
- Per OMB Guidance, agencies are encouraged to provide technical assistance to applicants for IIJA and other Fed grants, including tools to help quantify climate change and equity benefits of infrastructure projects.
- The **C**limate **M**apping for **R**esilience and **A**daptation (CMRA) Portal is being developed to support IIJA applicants in undertaking these assessments.

What is CMRA?

An integrated hub of Federal data, information, and tools designed to aid U.S. government entities, communities, & businesses in planning and implementing federally funded climate resilience projects, such as those funded by IJIA.

CMRA offers information about:

- Climate hazards—historical observations, current conditions, and future projections
- Resilience planning—e.g., building codes and CEJS tool
- Federal funding—including IJIA Programs and hazard mitigation

Key Partners

- ❑ White House - OSTP, CEQ, & OMB
- ❑ U.S. Global Change Research Program
- ❑ Federal Geographic Data Committee
- ❑ Department of the Interior / USGS
- ❑ DOC / NOAA
- ❑ IWG teams of subject matter experts

Current Status

- FY22 IJIA funds provided by both NOAA and DOI
- NOAA task order awarded to Esri on 7/13/22
- NOAA Climate Resilience Toolkit (CRT) Team took on the ‘managing editor’ role, working with WH Climate Interagency Working Groups (IWG) and interagency partners
- Site to be hosted/managed by NOAA, initially on Esri’s host platform, in association with the CRT (likely at resilience.climate.gov).
- First review draft of CMRA contents shared with WH IWGs and WH-selected stakeholders, comments received August 19
- Second round of reviews conducted and comments adjudicated
- Anticipated release of the CMRA Portal on September 8

CMRA Demonstration

CMRA Introduction Current Hazards Assessment Tool Hazard Information Federal Policies Open Data

Climate Mapping for Resilience and Adaptation

Climate Mapping for Resilience and Adaptation (CMRA) is a new and evolving portal that helps people consider their local exposure to climate-related hazards so they can protect people, property, and infrastructure. People working in community organizations or for local, Tribal, state, or Federal governments can use CMRA resources to help them develop equitable climate resilience plans and pursue Federal grant funds for climate resilience projects, including those available through the Bipartisan Infrastructure Law.

Hazard Report Extreme Heat

San Bernardino County, California

Risk Index Rating
⊙ Relatively Moderate

Total Population
⊙ 2,149,031

Building Codes Hazard Resistance
⊙ Partially Resistant

% Population Disadvantaged
⊙ 46.80%

Explore additional data



U.S. Climate Resilience Toolkit
Source: Census Bureau, CDO, ERI, FEMA, MIRC, NOAA, USCD

Historical Risk

Extreme Heat Annualized Frequency
⊙ 9.01

Expected Annual Loss Rating
⊙ Relatively Moderate

Expected Annual Loss Total (\$)
⊙ \$366,740.41



Future Climate Indicators

Indicator	Early Century (2030)		Mid Century (2050)		Late Century (2085)	
	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max	Low Emissions Min - Max	High Emissions Min - Max
Annual days with:						
Maximum temperature > 100°F	37 days 9 - 107	39 days 9 - 108	45 days 9 - 115	52 days 9 - 122	52 days 9 - 122	78 days 9 - 146
Maximum temperature > 100°F	78 days 0 - 136	73 days 0 - 138	79 days 0 - 144	86 days 0 - 151	87 days 0 - 144	111 days 0 - 172
Maximum temperature > 95°F	106 days 0 - 168	106 days 0 - 167	112 days 0 - 172	119 days 0 - 178	119 days 0 - 178	141 days 0 - 186
Maximum temperature > 90°F	134 days 0 - 182	136 days 0 - 185	142 days 0 - 198	148 days 0 - 204	148 days 0 - 204	189 days 2 - 224
Average Daily temperature:						
Average daily minimum temperature °F	54 °F 26 - 65	54 °F 26 - 66	55 °F 27 - 66	56 °F 28 - 67	56 °F 28 - 67	60 °F 32 - 71
Average daily maximum temperature °F	84 °F 56 - 91	82 °F 56 - 91	85 °F 57 - 92	84 °F 58 - 93	84 °F 58 - 93	88 °F 61 - 97
Annual temperature:						
Annual single highest maximum temperature °F	112 °F 81 - 122	112 °F 84 - 123	113 °F 81 - 124	114 °F 86 - 125	114 °F 86 - 125	118 °F 89 - 128
Annual highest maximum temperature averaged over a 5-day period °F	110 °F 81 - 121	110 °F 81 - 122	111 °F 82 - 122	112 °F 83 - 123	112 °F 83 - 123	116 °F 87 - 127
Cooling degree days (CDD)	3,875 days 3 - 5,390	3,150 days 4 - 5,472	3,327 days 3 - 5,704	3,571 days 38 - 5,994	3,571 days 14 - 6,001	4,432 days 63 - 7,044

N/A = Data Not Available for the selected area

Next Steps over Next 6 Months

- Public release of CMRA expected on September 8, to be followed by targeted outreach and feedback efforts
- Begin developing a 2nd task order
 - Expand scope and utilities in CMRA, such as:
 - Real-time state-specific summaries of hazard events
 - Integrate new data layers and government info as it becomes available
 - Incorporated solicited stakeholder feedback on CMRA
 - Commence first build of CRIS (Climate Resilience Information System), envisioned for Q2 of FY23
 - FGDC member agencies provided feedback on draft CRIS Work Plan in Mid-August (i.e. Concept & Design, Enterprise Architecture, etc.)
- Encourage continued role for NGAC in development of CRIS and CMRA